GIBCO BRL

Product Catalogue and Reference Guide

1995–1996

LIFE TECHNOLOGIES™

Producer of GIBCO BRL Products

MEM α Medium[1]

Base Catalogue No.	12571	11900	12561	12000	32571	32561	41061
Component	1X Liquid mg/L	Powder mg/L	1X Liquid mg/L	Powder mg/L	1X Liquid mg/L	1X Liquid mg/L	1X Liquid mg/L
INORGANIC SALTS:							
$CaCl_2$ (anhyd.)	200.00	200.00	200.00	200.00	–	–	200.00
$CaCl_2 \cdot 2H_2O$	–	–	–	–	264.00	264.00	–
KCl	400.00	400.00	400.00	400.00	400.00	400.00	400.00
$MgSO_4$ (anhyd.)	97.67	97.67	97.67	97.67	–	–	97.67
$MgSO_4 \cdot 7H_2O$	–	–	–	–	200.00	200.00	–
NaCl	6800.00	6800.00	6800.00	6800.00	6800.00	6800.00	6800.00
$NaHCO_3$	2200.00	–	2200.00	–	2200.00	2200.00	2200.00
$NaH_2PO_4 \cdot H_2O$	140.00	140.00	140.00	140.00	–	–	140.00
$NaH_2PO_4 \cdot 2H_2O$	–	–	–	–	158.00	158.00	–
OTHER COMPONENTS:							
D-Glucose	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00
Lipoic Acid	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Phenol Red	10.00	10.00	10.00	10.00	10.00	10.00	–
Sodium Pyruvate	110.00	110.00	110.00	110.00	110.00	110.00	110.00
AMINO ACIDS:							
L-Alanine	25.00	25.00	25.00	25.00	25.00	25.00	25.00
L-Arginine • HCl	126.00	126.00	126.00	126.00	127.00	127.00	126.00
L-Asparagine • H_2O	50.00	50.00	50.00	50.00	50.00	25.00	50.00
L-Aspartic Acid	30.00	30.00	30.00	30.00	30.00	30.00	30.00
L-Cystine	–	–	–	–	24.00	24.00	–
L-Cystine • 2HCl	31.00	31.00	31.00	31.00	–	–	31.00
L-Cysteine HCl	–	–	–	–	100.00	100.00	–
L-Cysteine HCl • H_2O	100.00	100.00	100.00	100.00	–	–	100.00
L-Glutamic Acid	75.00	75.00	75.00	75.00	75.00	75.00	75.00
L-Glutamine	292.00	292.00	292.00	292.00	–	–	292.00
L-Alanyl-L-Glutamine	–	–	–	–	434.00	434.00	–
Glycine	50.00	50.00	50.00	50.00	50.00	50.00	50.00
L-Histidine HCl • H_2O	42.00	42.00	42.00	42.00	42.00	42.00	42.00
L-Isoleucine	52.00	52.00	52.00	52.00	53.00	53.00	52.00
L-Leucine	52.00	52.00	52.00	52.00	52.00	52.00	52.00
L-Lysine • HCl	73.00	73.00	73.00	73.00	73.00	73.00	73.00
L-Methionine	15.00	15.00	15.00	15.00	15.00	15.00	15.00
L-Phenylalanine	32.00	32.00	32.00	32.00	32.00	32.00	32.00
L-Proline	40.00	40.00	40.00	40.00	40.00	40.00	40.00
L-Serine	25.00	25.00	25.00	25.00	25.00	25.00	25.00
L-Threonine	48.00	48.00	48.00	48.00	48.00	48.00	48.00
L-Tryptophan	10.00	10.00	10.00	10.00	10.00	10.00	10.00
L-Tyrosine	–	–	–	–	36.00	36.00	–
L-Tyrosine (disodium salt)	52.00	52.00	52.00	52.00	–	–	52.00
L-Valine	46.00	46.00	46.00	46.00	46.00	46.00	46.00

Nutrient Mixture Ham's F-12[1]

Base Catalogue No.	11765	11059	21016	21700	31765
	1X Liquid	1X Liquid	1X Liquid	Powder	1X Liquid
Component	mg/L	mg/L	mg/L	mg/L	mg/L
INORGANIC SALTS:					
$CaCl_2$ (anhyd.)	33.22	33.22	33.22	33.22	–
$CaCl_2 \cdot 2H_2O$	–	–	–	–	44.00
$CuSO_4 \cdot 5H_2O$	0.0024	0.0024	0.0024	0.003	0.0024
$FeSO_4 \cdot 7H_2O$	0.83	0.83	0.83	0.83	0.83
KCl	223.60	223.60	223.60	223.60	223.60
$MgCl_2$ (anhyd.)	57.22	57.22	57.22	57.22	–
$MgCl_2 \cdot 6H_2O$	–	–	–	–	122.00
NaCl	7599.00	7599.00	7599.00	7599.00	7599.00
$NaHCO_3$	1176.00	1176.00	1176.00	–	1176.00
Na_2HPO_4 (anhyd.)	142.00	142.00	142.00	142.00	142.00
$ZnSO_4 \cdot 7H_2O$	0.86	0.86	0.86	0.863	0.86
OTHER COMPONENTS:					
D-Glucose	1802.00	1802.00	1802.00	1802.00	1802.00
Hypoxanthine	–	–	–	–	4.00
Hypoxanthine • Na	4.77	4.77	4.77	4.77	–
Linoleic Acid	0.084	0.084	0.084	0.084	0.084
Lipoic Acid	0.21	0.21	0.21	0.21	0.20
Phenol Red	1.20	–	1.20	1.20	1.20
Putrescine 2HCl	0.161	0.161	0.161	0.161	0.161
Sodium Pyruvate	110.00	110.00	110.00	110.00	110.00
Thymidine	0.70	0.70	0.70	0.70	0.70
AMINO ACIDS:					
L-Alanine	8.90	8.90	8.90	8.90	8.90
L-Arginine • HCl	211.00	211.00	211.00	211.00	211.00
L-Asparagine • H_2O	15.01	15.01	15.01	15.01	–
L-Asparagine (free base)	–	–	–	–	13.00
L-Aspartic Acid	13.30	13.30	13.30	13.30	13.30
L-Cysteine HCl	–	–	–	–	36.00
L-Cysteine HCl • H_2O	35.12	35.12	35.12	35.12	–
L-Glutamic Acid	14.70	14.70	14.70	14.70	14.70
L-Glutamine	146.00	146.00	146.00	146.00	–
L-Alanyl-L-Glutamine	–	–	–	–	217.00
Glycine	7.50	7.50	7.50	7.50	7.50
L-Histidine • HCl • H_2O	21.00	21.00	21.00	21.00	21.00
L-Isoleucine	4.00	4.00	4.00	4.00	4.00
L-Leucine	13.10	13.10	13.10	13.10	13.00
L-Lysine • HCl	36.50	36.50	36.50	36.50	36.50
L-Methionine	4.50	4.50	–	4.50	4.50
L-Phenylalanine	5.00	5.00	5.00	5.00	5.00
L-Proline	34.50	34.50	34.50	34.50	34.50
L-Serine	10.50	10.50	10.50	10.50	10.50
L-Threonine	11.90	11.90	11.90	11.90	12.00
L-Tryptophan	2.00	2.00	2.00	2.04	2.00
L-Tyrosine	–	–	–	–	5.40
L-Tyrosine • 2Na • $2H_2O$	7.81	7.81	7.81	7.81	–
L-Valine	11.70	11.70	11.70	11.70	11.70
VITAMINS:					
Biotin	0.0073	0.0073	0.0073	0.007	0.0073
D-Ca Pantothenate	0.50	0.50	0.50	0.48	0.50
Choline Chloride	14.00	14.00	14.00	13.96	14.00
Folic Acid	1.30	1.30	1.30	1.30	1.30
i-Inositol	18.00	18.00	18.00	18.00	18.00
Niacinamide	0.036	0.036	0.036	0.037	0.036
Pyridoxine HCl	0.06	0.06	0.06	0.062	0.06
Riboflavin	0.037	0.037	0.037	0.038	0.037
Thiamine HCl	0.30	0.30	0.30	0.34	0.30
Vitamin B_{12}	1.40	1.40	1.40	1.36	1.40

1. Ham, R. G. (1965) *Proc. Nat. Arad. Sci., 53*, 288.

Nutrient Mixture, F-12K[1] (Kaighn's Modification)

Base Catalogue No.	21127
	1X Liquid
Component	mg/L
INORGANIC SALTS:	
$CaCl_2$ (anhyd.)	102.00
KH_2PO_4	59.00
$CuSO_4 \cdot 5H_2O$	0.002
$FeSO_4 \cdot 7H_2O$	0.80
KCl	285.00
$MgCl_2$ (anhyd.)	49.70
$MgSO_4$	192.00
NaCl	7530.00
$NaHCO_3$	2500.00
Na_2HPO_4 (anhyd.)	115.50
$ZnSO_4 \cdot 7H_2O$	0.144
OTHER COMPONENTS:	
D-Glucose	1260.00
Hypoxanthine • Na	4.00
Lipoic Acid	0.21
Phenol Red	3.00
Putrescine 2HCl	0.32
Sodium Pyruvate	220.00
Thymidine	0.70
AMINO ACIDS:	
L-Alanine	18.00
L-Arginine • HCl	422.00
L-Asparagine • H_2O	30.00
L-Aspartic Acid	26.60
L-Cysteine HCl • H_2O	70.00
L-Glutamic Acid	29.00
L-Glutamine	292.00
Glycine	15.00
L-Histidine • HCl • H_2O	45.80
L-Isoleucine	7.88
L-Leucine	26.20
L-Lysine • HCl	73.00
L-Methionine	8.96
L-Phenylalanine	9.92
L-Proline	69.00
L-Serine	21.00
L-Threonine	23.00
L-Tryptophan	4.10
L-Tyrosine • 2Na • $2H_2O$	13.50
L-Valine	23.00
VITAMINS:	
Biotin	0.07
D-Ca Pantothenate	0.50
Choline Chloride	14.00
Folic Acid	1.30
i-Inositol	18.00
Niacinamide	0.037
Pyridoxine HCl	0.06
Riboflavin	0.04
Thiamine HCl	0.30
Vitamin B_{12}	1.40

1. Kaighn, M.E., *Tissue Culture Methods and Applications*, (1973), Kruse, P.F., and Patterson Jr., M.D., ed., p.54-58.